

Early intervention for stigma towards mental illness? Promoting positive attitudes towards severe mental illness in primary school children

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**Early Intervention for Stigma prevention towards Mental Illness:
Promoting positive mental health literacy in primary school children.**

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Abstract

Purpose Stigma towards severe mental illness (SMI) is widespread, exacerbating mental health problems, and impacting on help-seeking and social inclusion. Anti-stigma campaigns are meeting with success, but results are mixed. Earlier intervention to promote positive mental health literacy rather than challenge stigma, may show promise, but little is known about stigma development or interventions in younger children. This study will investigate (i) children's knowledge, attitudes and behaviour towards SMI and (ii) whether we can positively influence children's attitudes before stigma develops.

Methodology A cross sectional study investigated mental health schema in 7-11 year olds. An experimental intervention investigated whether an indirect contact story-based intervention in 7-8 year olds led to more positive mental health schema.

Findings: Young children's schema were initially positive, and influenced by knowledge and contact with mental illness & intergroup anxiety, but were more stigmatising in older girls as intergroup anxiety increased. The indirect contact intervention was effective in promoting positive mental health schema, partially mediated by knowledge.

Social Implications: Intervening early to shape concepts of mental illness more positively, as they develop in young children, may represent a more effective strategy than attempting to challenge and change mental health stigma once it has formed in adolescents and adults.

Originality/Value: This study is the first to investigate an intervention targeted at the prevention of stigma towards severe mental illness, in young children, at the point that stigma is emerging.

Keywords: Stigma; Severe Mental Illness; Early Intervention; Young Children.

Article Classification: Research Paper

Introduction

The stigma attached to mental illness is greater than for any other western health condition (Hinshaw 2005; Thornicroft 2006). Not only is stigma harmful in and of itself (Brown 2010; Link et al, 2001; Wright et al. 2000), but it may exacerbate existing mental health problems, contribute to intergroup anxiety, educational underachievement, social exclusion, self-stigma and reduce the likelihood of self-referral when symptoms manifest themselves (Corrigan et al. 2001; Huxley and Thornicroft 2003; Vogel et al. 2007; Woodward et al. 2007).

Symptoms are most likely to develop during adolescence and early adulthood (Costello et al. 2006; Kirkbride et al. 2012; Young Minds 2010), yet young people are the least likely to access services (Biddle et al. 2004; Insel and Fenton 2005, Gulliver et al. 2010) and stigma towards mental illness in this age group (O'Driscoll et al. 2012) and towards psychosis is common (Angermeyer et al. 2013; Hinshaw 2007;).

Evidence suggests that the foundations of negative attitudes towards mental illness may be laid in childhood (Corrigan and Watson 2007; Hinshaw 2007; Wahl 2002). Both incremental learning and cognitive stage models have been evoked to explain this stigma development in young people (Corrigan and Watson 2007), yet empirical studies are limited and outcomes are mixed. Some studies suggest that young children endorse more prejudice than older children (Weiss 1986, Yap and Jorm 2012), and a recent large Kenyan study showed that in primary school children, younger age predicted more stigma (Ndetei et al. 2016). Other studies suggest that attitudes and behaviour become more negative with older age and adolescence (Spitzer and Cameron 1995; Wahl 2002). Some studies have suggested that changes in stigma with age depend on the mental health condition (Swords, Heary and Hennessy 2011), or the type of stigma measured such that older children want less physical distance but exclude more than younger children (O'Driscoll et al. 2012). Severe mental

illness, considered to comprise a persistent psychotic illness with poor general function (Ruggeri et al. 2000), is a highly stigmatised condition, yet few studies have investigated young children's attitudes to severe mental illness. Indeed, there are few theoretical frameworks for understanding stigma towards mental illness in children (Mukolo et al. 2010). Gender and the presenting mental health problem may play a role in the expression of stigma. Some studies have found greater stigma in males (Jorm and Wright 2008; Williams and Pow 2007; Ndeti et al. 2015), dependent on mental health condition (Swords et al. 2011), whilst others have not found these differences (Walker et al. 2008).

Greater understanding of stigma development, combined with effective methods to counteract it, are thus essential. Mass-media interventions directed at the general adult public have shown small to moderate effects, and school based interventions show promise at best (Clement et al. 2013; Schachter et al. 2008; Wei et al. 2013; Yamaguchi et al. 2011), with effects being greatest for direct or indirect contact-based interventions with people with mental illness. School-based programmes have largely targeted adolescents, in whom stigma towards mental illness is already present and arguably harder to change. Only a handful of studies have addressed this issue in younger children (DeSocio et al. 2006; Lauria-Horner et al. 2004; Pitre et al. 2007; Ventieri et al. 2011), yet primary schools are well placed to promote positive mental health literacy before stigma develops.

This study first sought to explore the nature of young children's mental health schema (their knowledge, attitudes and behaviours) towards severe mental illness using a cross-sectional study; and second employed a small-scale experimental intervention to examine whether and how children's schema could be improved using an extended contact story-telling technique (Cameron et al. 2006). Psychosis and OCD vignettes were selected due to their potential to attract stigma and their phenomenological overlap (Bottas et al. 2005). The study focussed on

children aged 7-11, because cognitive models suggest that from age 7, children have a level of cognitive maturity that enables stigma to develop (Corrigan and Watson 2007). It was hypothesised that older children would demonstrate more stigmatised knowledge, attitudes and behaviour **in response to the severe mental illness presented, as a result of their cognitive skills becoming more developed and as such their increased ability to recognise the associated experiences as unusual.** It was also hypothesised that the increased stigma would be associated with greater intergroup anxiety and less contact with people with mental illness, and that the intervention in this young age group would promote positive mental health schema.

Method

Cross-sectional study

Study 1 aimed to explore the correlates of age, gender and self-reported contact with mental illness, with the mental health schema (knowledge, attitudes and behaviours) of primary school children (aged 7-11). A secondary aim was to develop age-appropriate measures, for the intervention study.

Participants

Participants were 77 children recruited from two state schools in the south of England (47% male), across age 7-11. Ethical approval was obtained from the University of Sussex, Department of Psychology Institutional Review Board. Recruitment was through school, parental and child informed consent.

Measures

1. *Mental Illness Schema Questionnaire* – Two brief vignettes of children named Adam and Sarah, describing someone experiencing symptoms of schizophrenia and of OCD, were followed by three scales derived from existing instruments, which made reference to vignette characters.

i) The Knowledge scale was adapted from Watson et al. (2004) and assessed level of agreement with 11 statements, including common misconceptions about mental illness, treatability, causality {e.g. People like Sarah and Adam need help doing everything}.

ii) The Attitudes scale was adapted from the revised attribution questionnaire (Corrigan et al. 2002), which assesses levels of agreement with attitudes about responsibility, blame, dangerousness, benefits of help, emotional responses and inclusion. A shortened three-item scale was constructed, based on reliability data which included items such as {I would try to stay away from Sarah and Adam; I would help Sarah and Adam}.

iii) The Intended Behaviour scale was adapted from ten items of a social distance measure to address intended behaviour towards people with schizophrenia, and level of agreement regarding intentions to communicate and socialise with the vignette characters {e.g. I would like to play with Sarah and Adam at lunchtime, I would tell Sarah and Adam my secrets} (Schulze et al. 2003).

All scales were adapted to be age-appropriate for primary school children and were scored on a 5-point likert scale with anchors represented by unhappy (1) to happy (5) faces. They had good internal reliability ($\alpha = .71; .66; .83$ respectively). Negatively worded items were reversed so that higher scores indicate more positive attitudes, knowledge and behaviour.

2. *An Intergroup Anxiety* scale for children was adapted from Stephan & Stephan (1985), to assess emotions ('nervous', 'afraid', 'happy' 'calm') towards the vignette characters on a 4

point likert scale. Scoring for positive items was reversed so that higher scores indicated higher intergroup anxiety. Internal reliability was good ($\alpha = .72$).

3. *Inclusion of self in other (IOS)*. A single item measure of the child's incorporation of outgroup members in self was taken from Cameron et al. (2006). Children indicated how similar they were to the vignette characters by choosing one of three diagrams, each containing one empty circle and one circle of cartoon children, (to represent self and other) but differing in extent of overlap, from none to highly overlapping.

4. *Self-reported direct contact*

Children were asked how many people they knew like the children in the vignettes (1= none, 2= some, 3= a lot 4 = everybody). Due to skewed distribution (53% reported no contact), responses were dichotomised into no contact (1) or contact (2).

Procedure

The researcher explained the procedure and rating scales, and answered any questions. All children completed the questionnaire independently in either a 1:1 session (Children aged 7-9 years) or in small groups (Children aged 9-11 years).

Analysis Plan

Four multivariate linear regression analyses regressed children's mental health literacy (attitudes, intended behaviour, intergroup anxiety, IOS) on Age, Gender, the interaction of Age and Gender, Contact and Knowledge. Standardized beta (Std. β) values were presented to allow assessment of the strength of the effect where a Std. β of 0.14, 0.39 and 0.59 correspond to Cohen's definition of small, medium and large effect sizes respectively.

Intervention study

Study 2 aimed to develop and evaluate the effectiveness of a brief story-based intervention, incorporating both indirect contact principles and education, to promote positive mental health schema development in young children aged 7-8 years. It was hypothesised, from Cameron et al. (2006) that positive mental health schema would develop through improved inclusion of self in other and reduced intergroup anxiety. To the extent that the intervention also increased children's knowledge, then knowledge might also prove a mediator.

Participants

A new sample of forty-two children (52% male; mean age = 94 months, range 84-96 months) were randomly allocated, to either the experimental (n=21) or the control condition (n=21). Slightly more girls were in the experimental (62% female) than the control condition (33% female); ($\chi^2 = 3.44, p < .07$).

Procedure

In each condition, the children were read two different stories on separate days. In keeping, with a randomised experimental design (Campbell and Stanley 1963), this was followed by an assessment of their mental health schema one week later. Participant recruitment followed the same format as for study 1.

Measures

The measures were those described and reported in study1.

Intervention

Each experimental intervention lasted approximately 30 minutes and comprised an indirect contact element, in which a specially developed story was read to the children, followed by

an educational component in the form of a group discussion. The stories were written by an experienced psychotherapist and children's writer and their content was carefully controlled to be consistent with extended contact principles. They depicted positive friendships between young people with severe mental illness, their friends and family, and those without mental health problems so as to provide several experiences of indirect contact (awareness of members of the ingroup having positive relationships with members of an outgroup). Each story was followed by a structured discussion where key aspects of the story were emphasised: (i) the continuum of mental illness with normal experience; (ii) the causal role of both genes and environment; (iii) the importance of the way we understand and respond to mental illness; (iv) the possibilities for intervention and recovery; and (v) that it is acceptable to talk about mental illness. The discussion employed learning approaches such as scaffolding, massed practice and errorless learning to impart inclusive knowledge, attitudes and behaviours regarding mental illness. Children in the control condition participated in two equivalent sessions, using identical stories but with the characters with mental health problems being replaced by neutral ones. The post-story discussion focussed on the children's understanding and recall of the stories.

Analysis Plan

The effects of the intervention were analysed using multivariate linear regression for each dependent variable. In view of the gender imbalance between conditions, gender was entered first as a control variable, followed by condition (Intervention versus Control). Potential mediating processes underlying the effects of the intervention were explored individually in a 3rd step, for each dependent variable.

Simple mediation models with bootstrapping, investigated indicated mediators, as appropriate for small sample sizes, using SPSS macro for mediation analysis (PROCESS) provided

online at <http://www.afhayes.com/introduction-to-mediation-moderation-and-conditional-process-analysis.html> (Preacher and Hayes, 2008).

Results

Cross-sectional study

Summary statistics

Attitudes, intended behaviour and knowledge were all positive, whilst intergroup anxiety was low. The proportion reporting contact with someone with mental illness showed no variation with gender ($\chi^2 (1) = 2.07, p > .10$) but some variation with age – only 29% of the younger age group (7-9 years) reported knowing someone with mental illness, compared with 58% of the older group (9-11 years) ($\chi^2 (1) = 6.10, p < .02$). The bivariate correlations revealed that, as expected, knowledge, attitudes and intended behaviour were all negatively associated with intergroup anxiety, with weak positive correlations with contact.

Multivariate linear regressions

Regressions were conducted in a step-wise fashion for each dependent variable: Age and Gender; Age*Gender; Contact; Knowledge (Table 1). Neither Age nor Gender alone was significantly related to any of the dependent measures. However, their interaction was reliably associated with Intended Behaviour, Intergroup Anxiety, and marginally with Attitude. These interactions are presented in Figure 1. Boys' attitudes and intended behaviour became more favourable with age and their intergroup anxiety decreased. Girls, on the other

hand, tended to show changes towards less favourable intended behaviour and increased intergroup anxiety.

[Insert Figure 1 about here]

Contact showed weak associations in the expected direction: positive with Intended Behaviour (marginal), Attitude (non-significant) and IOS. Knowledge, in contrast, showed more consistent and significant relationships with all four dependent measures: positive for Intended Behaviour, Attitude and IOS, negative for Intergroup Anxiety. The contact effects remained virtually unchanged in step 4, once Knowledge was controlled. In this cross-sectional study, Contact and Knowledge seemed to be independently related to attitudes towards mental illness.

[Insert Table 1 about here]

Intervention study

Multiple Regressions to investigate effects of the intervention

1. Effects of the intervention

Table 2 shows that the intervention had medium-large effects on all variables in the predicted direction. All beta weights for Condition were highly significant and the resulting models accounted for between .23 to .41 of variance. The effect of the intervention was to shape children's Knowledge ($M_s = 3.82, 3.18$), Attitudes ($M_s = 4.90, 4.17$), Intended Behaviour ($M_s = 4.70, 3.76$), and Inclusion of Self in other ($M_s = 2.43, 1.52$) to be more positive, and to lower their Intergroup Anxiety ($M_s = 2.13, 2.83$) towards people with mental illness.

[Insert Table 2 about here]

2. *Potential mediating variables*

In light of the role of knowledge in study 1, the hypotheses in study 2 and inter-correlations between variables, Intergroup Anxiety, IOS and Knowledge were all tested as potential mediators of the effect of the intervention on children's mental health literacy. Only Knowledge independently predicted Attitude and Intended Behaviour, once the effects of Condition were controlled and could be considered a potential mediator (Preacher and Hayes 2008). Bootstrapped simple mediation models revealed that the impact of the intervention on Attitudes and Intended Behaviour, was mediated by increased knowledge about mental health (See Table 3).

[Insert Table 3 about here]

Discussion

Cross-sectional study

Consistent with incremental and cognitive stage models (Corrigan and Watson 2007), young children are largely positive about mental illness, and girls are more positive than boys, at least in the younger age group (7-8 years). However, attitudes, and intended behaviour improved and intergroup anxiety reduced with age in boys, whilst girls' intergroup anxiety increased as they got older, matched by some deterioration in intended behaviour.

This positive change in boys, might support an incremental learning explanation, such that young children become aware as they get older, of social desirability rules, and so express positive views and avoid discrimination. However, the deterioration in intended behaviour in

girls is inconsistent with this, and more consistent with a cognitive stage model (Flavell 1999), whereby stigma worsens as children become older and are able to form a mental illness construct towards which anxiety and stigma are extended. If this is correct then our results suggest that mental illness schema, and then stigma towards it, develop gradually, linked closely to anxiety, and occurring first in girls. A more fine-grained exploration (not reported due to small sample size) did suggest that this stigma does also occur, albeit later, in boys.

Furthermore, as children progress to adolescence, research suggests that even social desirability rules become more negative as they conform to the views of peers. Adolescent girls can hold conceptualisations of mental illness and affective responses similar to those of adults, and at the same time hold adolescent responses that mental illness is something to make fun of, and even if their initial responses were empathic, conform to friends who are making fun of someone (Pinto-Foltz et al. 2010). Adolescents also reported that they would be unlikely to tell peers if they experienced mental health difficulties, for fear of being thought mentally ill, and being socially excluded (Chandra and Minkovitz, 2007) and by aged 14, almost half the words students generated to describe people with mental illness are popular derogatory slang, such as ‘freak’, ‘nuts’ and ‘psycho’ (Rose et al. 2007). Our research suggests that early development of mental illness schema is positive, and that deterioration only occurs with the development of intergroup anxiety as children progress towards adolescence. This alternative curvilinear account suggests that aged 7-9 onwards is a prime time to provide programmes to promote and maintain positive mental health schema.

Intervention study

Our brief intervention was highly effective in leading to more positive mental health schema relating to severe mental illness in young children, one week after the intervention. These effects explained substantial proportions of variance. The intervention was well-received by children, none of whom declined to take part. Knowledge partially mediated the effect of the intervention specifically on Attitudes and Intended Behaviour. This study provides clear support for the value of providing knowledge to young children in a non-stigmatising form to enable them to develop positive mental health schema early in relation to severe mental illness.

Main Discussion

Neither children's knowledge, nor their anxiety towards mental illness was related to their self-reported contact. Indeed, contrary to expectations, self-reported contact was only a weak predictor of a limited number of mental illness schema. Hence, the presence or absence of direct contact with mental illness does not appear to have the same effect on mental health schema in young children, as occurs in adolescents and adults.

This weakness of association between contact and mental illness schema, while inconsistent with the traditional contact hypothesis (Allport 1954), may be expected, however, if the concept of mental illness, and of mental illness as an outgroup is not yet fully formed. Knowledge, rather than any measure of direct contact, appears to drive the positive attitudes that develop in this younger age group. This is consistent with literature that young children's knowledge develops with age and in itself can contribute to more positive mental illness schema.

The absolute level of contact: the number of people with mental illness known to the children, was quite low. In such circumstances, one might expect *extended* or indirect contact effects; the number of others in the person's ingroup who know outgroup people with mental health problems, to have stronger effects (Wright et al. 1997). Extended contact effects are more likely to be in evidence when the opportunities for direct contact are few (Christ et al. 2010; Eller et al. 2012). This story-based intervention, in which ingroup protagonists are seen to enjoy friendly relationships with members of the outgroup with severe mental illness, provides this extended contact (Cameron et al. 2006). Unexpectedly though, neither anxiety nor inclusion, mediated the effect of the intervention on attitudes and intended behaviour. This suggests that, here too, while the indirect contact intervention played some role in reducing anxiety and improving inclusion in young children towards more severe mental illness, it did not lead to improved attitudes and behaviour.

Attitudes and behaviour, anxiety and inclusion are thus all positively impacted by the intervention but through different routes. Attitudes and behaviour are especially improved when knowledge is enhanced; whilst anxiety and inclusion outcomes appear impacted by the indirect contact intervention. Positive knowledge may be especially pertinent early, at this formative phase, whilst contact, and its impact on mental health schema, anxiety and inclusion may become more relevant later, once children have formed a mental illness construct and when intergroup anxiety is developing.

This is a small-scale investigation and requires replication in a larger sample, incorporating a more extensive intervention, blind assessment and real-world outcomes (Blanton and Jaccard 2006). However, these studies provide preliminary evidence of the development of mental health schema and stigma in young children, prior to the onset of adolescence. They also

provide preliminary evidence for the need and the value of intervening early to shape children's mental health schema. They suggest that *early* interventions to promote positive schema, through indirect story-based contact and education, are highly effective towards severe mental illness, which is associated with arguably the greatest stigma and self-stigma of all mental health conditions, and the least knowledge, across children, adolescents and the general adult public. There is potential to impact on mental health schema, intergroup anxiety, inclusion, resilience to stigma and self-stigma development and help-seeking in children and young people. Outcome data was collected at 1 week, which provides good evidence of the short-term effect of the intervention, but the durability requires further investigation. If the intervention is indeed effective, more work is needed to embed the approach into routine practices within the general school curriculum, supported by public policy, teachers and parents. **Specifically, this research suggests that primary schools should not shy away from but rather should actively teach about the common features, and prevalence of the full range of mental health problems. This teaching should be delivered by teachers as part of the core curriculum, and our research suggests that teachers will need support and training themselves, to enable them to deliver this (Cooke, King & Greenwood 2016). This approach has enormous potential to reduce societal stigma towards mental illness in the longer term, and to enable those children who do later develop mental health problems to recognise this and to seek help earlier.**

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